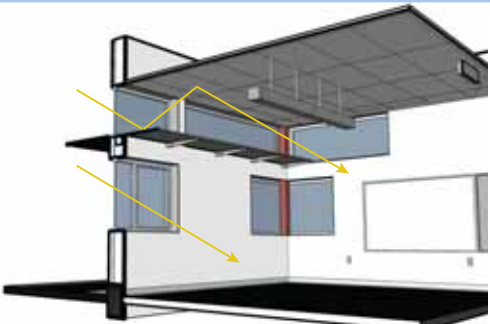




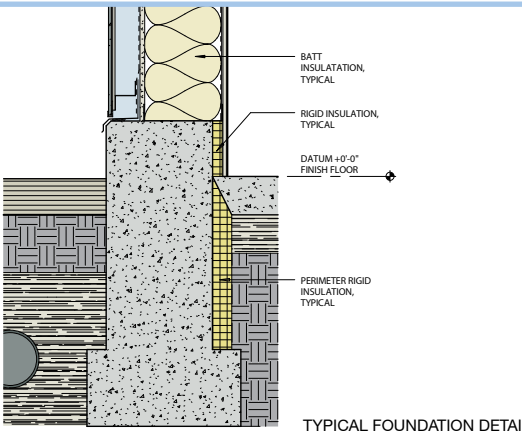
Eastgate Elementary School is a new 2-story, 63,500 SF replacement of the former school on the same site. The design focuses on a connection with nature. The building is laid out in a checkerboard pattern that makes solids and voids – building and courtyards - thus creating multiple opportunities for interaction between inside and outside. As one moves through the school, multiple views to the courtyards and the tall trees bordering the site provide a continual connection to nature.

Energy Use Intensity (EUI) = 83.7 kBtu/sf/yr
 Percent CO₂ reduction = 28%
 ENERGY STAR design rating = 82

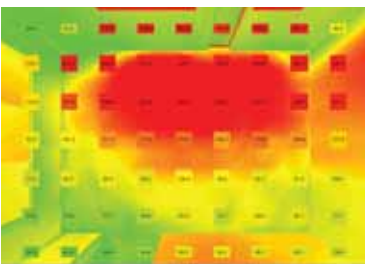
Annual Savings Statistics
(compared to an average building EPA rating of 50)
 Energy savings = 2,085,388.4 kBtu
 CO₂ savings = 84.6 tons CO₂



optimizing daylighting: sunscreens and light shelves in typical classroom

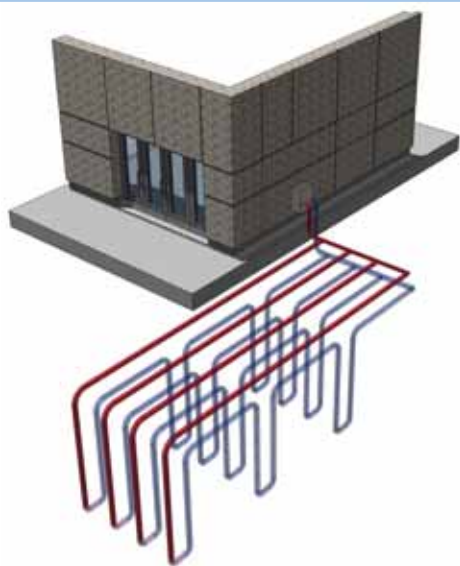


innovative detailing at foundation to minimize thermal bridging



REFLECTANCE	
Ceiling	79%
Paint	77%
Whiteboard	90%
Carpet	25%
Light Shelf	85%
TRANSMITTANCE	
Clear Glass (upper)	73%
Clear Glass (lower)	73%

digital lighting analysis



ground source heat pump loop system



- An eco-charrette was held early in the project with the A/E team, Owner, maintenance groups, and administrators to target preferred conservation strategies.
- A ground-source heat pump system was used to eliminate the need for natural gas; the earth provides the source for heating and cooling.
- Innovative details minimize the thermal bridging.
- Digital lighting analysis was performed to optimize natural light in classrooms.
- Energy cost/square foot = 1.386 MBTU*
- Space type = school
- Total SF of building = 63,500 SF

*from Hannon et al (1977)

Eastgate Elementary School

Bellevue, Washington

